Safety Review Committee
October 17, 2003
10:00 AM – 12:00 PM

Minutes

Members Present
Joel Ager, Dennis Collins, Ben Feinberg (Chair), Ken Fletcher, Richard Kadel, Mack Kennedy, Ed Lampo (Secretary), Augusto Macchiavelli, Othon Monteiro, Linfeng Rao, Scott Taylor, Weyland Wong, Linda Wuy, Hisao Yokota
Members Absent
Michael Banda, Sharon Doyle, Peter Lichty, Don Lucas, Steve Lundgren, Linda Smith
Others Present
Paul Blodgett, Don Grether, Guy Kelley, Larry McLouth, Otis Wong, Gary Zeman

Previous Minutes

The September meeting minutes (as revised 16-Oct-2003) were distributed and discussed. The minutes were accepted as submitted.

Comments from the Chair

Ergo Pilot: Draft of Evaluation request has been sent to Ergo Sub-committee for comment.

2004 MESH: Leaders for 2004 MESH teams will be contacted and confirmed at next meeting.

Environmental Energy Technologies Division: MESH Response

Mack Kennedy, MESH Team Leader for EETD review, explained that they found EETD had an excellent ES&H program in operation. For the last three years their "At-a-Glance" record has been perfect; all green. The MESH review lists many Noteworthy Practices. Mack introduced Don Grether, EETD Deputy. Don's response to the MESH review follows.

Overview of EETD

The division performs R&D in the areas of energy efficiency and environmental conservation. Some recent contributions are the electronic fluorescent ballast, low “NOX” burner, aerosol duct sealer, and low energy fume hood. In addition to EETD's scientific programs they have a formal Council for Environment, Health & Safety, overseen by Don Lucas and Guy Kelley. Ten EETD staff are trained Ergo Evaluators. The Division participated in the SRC's "Ergo Pilot Program" and thereby was able to accomplish 50 workstation upgrades.

EH&S Program/Activity

As pointed out in Mack's introduction, since FY2000 the EETD Self-Assessment Performance (At-A-Glance) record has been perfect; all green. This record is after many years of serious deficiencies. The EH&S objectives and approach to attain this record are:

- Ensure that research activities are conducted safely and in compliance with applicable federal, state, local, and laboratory requirements
- Provide PI’s the information, tools, data, etc. to carryout their EH&S responsibilities
- Back-up with Division oversight
- Identify key Division safety issues for action
- Prioritize and act upon these issues
- Address attitude and effort to steadily improve the safety culture

Line Management Responsibility for Safety

- •Division Director
- —Ultimate responsibility for Division safety activities
- —Can and does commit resources to address this responsibility
- —Delegates responsibility downwards through line management: Department and Heads, Group Leaders, PI's, staff
- •Department Heads
- —Provide, as members of the EETD Division Council, collective management guidance
- —Assure that Group Leaders and PI's within their Department meet safety responsibilities

EETD Safety Team

- •Safety Manager (0.2 FTE) - Don Lucas
- —Represents Division management
- —Reports to Division Director
- —Supervises the Safety Coordinator
- —Serves on the LBNL Safety Review Committee (SRC)
- •Safety Coordinator (0.7 FTE) - Guy Kelley
- —Responsible for division safety operations: review of facilities, documentation, inspections, report preparation
- —Serves as main point-of-contact with EH&S Division
- —Serves as Division safety resource
- •EH&S Division Liaison - Larry McLouth
- •Meets quarterly with Division Council

EETD Safety Committee

- •History
- —Effectively disbanded in change of Division Directors
- —The "red" years led to a reconstituted committee
- •Included at least one person and backup from each Department
- •Role of committee not clear - whether "activist" or information exchange
- —Judged ineffective as compared to "hands-on" approach of Safety Team
- •Present Membership
- —Safety Team plus Division Deputy (Don Grether) and Business Manager (Nancy Padgett)
- —Largely issues driven with outcomes that include
- •Follow-up actions by committee members
- •Policy formulation for presentation to Division Council

Ongoing EH&S Activities

- •Division level
- —Safety Manager on agenda for Town Hall Meetings
- —Safety Team meets at least quarterly with Division Council
- —Annual Self-Assessment and Quarterly Safety Report
- —EETD Intranet EH&S web site
- —Occasional items in almost weekly electronic newsletter What's New in EETD
- •Project level
- —Project Safety Review (PSR) at time of project proposal or renewal by Safety Coordinator
- —Follow-up with PI over any EH&S issues
- •Laboratory (small "l") level
- —Regular walkthroughs, including management walkthroughs
- —Activity Hazard Document (AHD), Sealed Source Authorization (SSA), Satellite

Accumulation Area (SAA), Laboratory Corrective Action Tracking System (LCATS), Radiation Work Authorization (RWA), etc.
—Direct involvement of Safety Team in EH&S issues
•Individual level
—Take Job Hazards Questionnaire (JHQ) at least annually
—Take required training
—Have EH&S performance reviewed against expectations as part of Performance Review & Development (PRD) or Performance & Progress Review (P2R)
—Increased staff by-in to a higher level of safety consciousness
•Accident Prevention Program
—Proactive accident prevention strategy formulated in PY2000
—Employee, supervisor, Division Safety Coordinator and Division Liaison jointly investigate all accidents
—Safety Manager brought in for reportable accidents
—Reportable accidents reviewed at Safety Committee meetings
—Follow-up corrective actions
•Review of accident types
—Most of EETD's injuries are ergonomics related
—Otherwise, no clear pattern

Response to MESH Review
•Review was generally positive
•A number of "observations", primarily in 70
—being taken care of as a matter of course
•One "concern" re the John Kerr labs in 62
—Housekeeping - overly cluttered
—Storage shelves for chemicals crowded
—Utility corridor used as passageway and storage area for flammable materials
•Subsequent to MESH review there was an "incident"
—Obsolete plumbing led to chemical spill on floor
—Led to other concerns, for example with wiring
•Immediate Division response to incident was "stop work" order
•Safety team (Lucas, Kelley, McLouth) and Grether met with Kerr on September 17
—Made clear unacceptability of continuing past practices
—Reviewed and concurred with Kerr's written corrective action plan
—Toured labs and discussed corrective actions
•With respect to concerns
—Housekeeping: lab cleanup has been substantial
—Chemical storage: excellent progress in disposing of excess chemicals
—Utility corridor: meeting and walk-through by Fire Marshall, combustible materials have been eliminated
•Larger effort in connection with Molecular Foundry to reconfigure/reassign space in 62 may
—Provide Kerr with contiguous space
—Permit opening up the space for better oversight, less crowding

Conclusion and Future Directions
•Conclusions
—Division has a functioning safety system in place
—Steady record of improvement
—Commitment to continued progress

•Future Directions
—Continue our ergonomics program
—Continued upgrading of the EETD EH&S web site
—Put in place policy and process to avoid future cleanup problems
—Continue to use OPA and SPOT awards for exemplary EH&S performance
—Develop more formal off-site work reviews
—As feasible, consolidate 70 for programmatic reasons as well as enhanced EH&S oversight

Discussion of MESH Frequencies

The SRC has been requested to schedule future MESH reviews for those Divisions reviewed this year. The next reviews can be in either two, three or four years. Final determinations are based upon the findings this year and subsequent ISM board review. The findings, concerns, and noteworthy practices of this year were discussed. Tentatively, ALS, EETD, and PBD will have four years until their next MESH and the Directorate will be reviewed in two years.

Update on External Regulators' Visits

Gary Zeman pointed out that for several years there has been a push for external regulation of DOE labs. In 1995 Dr. John F. Ahearne, Advisory Committee on External Regulation of Department of Energy Nuclear Safety, suggested, "Essentially all aspects of safety at DOE's nuclear facilities and sites should be externally regulated." This was reiterated in a 1996 DOE press release: "The Department of Energy (DOE) will submit legislation to transfer oversight of nuclear safety to the Nuclear Regulatory Commission, Secretary of Energy Hazel R. O'Leary announced today." Gary continued that external regulation really is an excellent fit for Berkeley Lab. It would improve effectiveness and efficiency of the safety program by establishing uniform/consistent standards and clear lines of accountability. By leveling the playing field with non-DOE labs there will be increased public trust/confidence. Other considerations include:

- Open processes with public input
- Concomitant reduction in DOE ES&H oversight is essential to realize the purported benefits.
- Dual regulation, layered oversight are show stoppers.
- No delegation of oversight below the State level.
- Regulatory agencies must resolve jurisdictional issues, including the future role of DOE in safety oversight and management.

Defining who could/should/would have oversight is not simple. There are many statutes specifying overlapping jurisdictions multiple responsibilities. The definitive guidance is the Omnibus Bill of March 2003:

- Directing that NRC and OSHA conduct compliance inspections of the ten SC laboratories. DOE to report on corrective action costs by April 30, 2004
- Inspect initial set of four labs by September 30, 2003 [ORNL, ANL-E, PPPL, and TJNAF]
- Inspect all ten labs by March 31, 2004.

The scopes of inspections under this plan are as follows.

OSHA Inspection

- Pre-audit scoping visit Sept. 2003
- Audit expected in Jan./Feb. 2004
- Wall-to-wall – all buildings may be inspected
- Expect 20 OSHA auditors
- Duration will be 1-2 weeks

- ORNL audit – 1,570 instances

NRC Inspection

- Initial visit occurred August 12, 2003
- Audit expected Oct. 20-23, 2003
- Programmatic focus – Licensing
- Expect 2-3 NRC auditors
- Medical Devices (PET) – 10 CFR35
- Accelerators/X-rays – 10 CFR36
- D&D – Prepare funding plan

The NRC Pilot at LBNL (October 1997 – January 1998) is adequate to protect worker health and safety, the public and the environment. The NRC is "ready to issue broad scope license" (a mock license was included in the Pilot report).

There still exist jurisdictional issues:

- Who will issue the license (State or NRC)?
- Who will hold the license (UC or DOE)?

The estimated costs (October 2003) for transition to external regulation.

NRC ($300k – 950k)

Issues and costs identified in 1997 Pilot

Transition costs

- Re-write Procedures and Training Courses to incorporate NRC regs

Costs for new requirements unique to NRC

- Human use requirements
- Locked door policy for rad labs (this drives the "High" estimate)

Getting Ready for 2003 NRC Audit

- NRC visit will be a licensing review, not an inspection
- RWAs, SSAs, RIJs up to date
- HP/RCT walk around of all RWA/SSA spaces
- Housekeeping
- Review agenda

Preparations for OSHA Inspection

- Identify administrative and institutional fixes
- Develop a check list for labs and shops
- Post awareness information on Today at Berkeley Lab web page
- Assemble inspection teams
- Conduct inspections
- Close out 1999 OSHA Pilot Findings
- Consolidate OSHA Pre-inspection information

Examples of OSHA Administrative Fixes

- Blocked emergency eyewash showers (EEWS)
- Chemical containers missing name/haz. ID
- Incompatible chemicals stored together
- Fume hood air flow obstructed
- PPE not stored properly
- Extension cords in lieu of permanent wiring
- Cracked or exposed wiring
- Blocked electrical panels
- LOTO issues

OSHA Institutional Fixes

- No EEWS in chemical use areas

- Lack of fume hood monitors
- Extension cords in lieu of permanent wiring
- Lack of GFCIs near water source

$25M may be available SC FY 04 for fixes across SC
Additional $ may be budgeted for FY 05/06

Update on Laser Safety Corrective Action

The Laser Safety Program Review Panel was convened to provide a comprehensive review of the LBNL Laser Safety program for all on-site operations as well as the UCB laser safety program to the extent that it affects LBNL laser operations on the University of California Berkeley campus. On the panel are:

•R. Timothy Hitchcock, CIH, CLSO, Chairman
•Donald Lucas, LBNL Environmental Energy Technologies Division
•Paul Lavely, UC Berkeley EH&S
•Frank Svec, UC Berkeley College of Chemistry
•Roger Christensen, Pacific Northwest National Laboratory

There are two objectives for this review: (1) to determine whether a consistent and effective approach to work planning, hazards analysis and controls exists for DOE sponsored work at LBNL and the UCB campus; and (2) to provide recommendations for program improvements so that laser accidents are prevented and the safe conduct of scientific research that uses lasers is optimized. The panel gave somewhat different instructions to the Campus and to LBL. The findings and recommendations are listed in the September SRC Minutes, in summary:

Corrective Action Plan

•Chuck Shank tour of lab
–"total beam enclosure or eyewear"
•ISM for LBNL work at UCB
–Line management accountability
–MOU on EH&S oversight
•Panel investigation
–13 recommendations for LBNL, 22 for UCB
–Some already implemented, some will take time, some require SRC attention

SRC Attention Needed

1.Affirm "total beam enclosure or eyewear"
2.Require next round of laser AHD renewals to go thru EH&S (to ensure implementation of most panel recommendations)
3.Eyewear outside lab – options for implementation
4.Crash buttons for electrical safety – not a laser safety issue, exclude this ANSI Z136 requirement from WSS
5.NHZ calculation – affirm current implementation scheme, exclude this ANSI Z136 requirement from WSS
6.Return in 3 months with closure report on CAs

Feinberg mentioned that at a Laser Safety Workshop he recently attended, 40% said they could not guarantee "goggles or enclosure" for their setups. Kadel observed that requiring interlocks can complicate operation. However, the Laser Investigation supports the requirements. Feinberg suggests that the Laser Committee look into how to implement needed safety requirements.

Update on MOU with UCB

The MOU is now titled "Partnership Agreement Between UCB and LBNL Concerning Environment, Health and Safety Policy and Procedures" and is referred to as the PAB. It has undergone edits by Berkeley Lab's SRC and EH&S and is now with UC Berkeley senior staff. The SRC requests review of "shared space" and any changes by the campus.

The meeting was adjourned at 12:01 PM.

Respectfully submitted,

Edward J. Lampo
SRC Secretary